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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Carriere et al.
Appl. No. : 10/690,749
Filed : 10/23/2003
Title : DRILLING RIG APPARATUS AND DOWNHOLE TOOL ASSEMBLY
SYSTEM AND METHOD

Grp./A.U. : 3672
Examiner : Thompson, Kenneth L.

Docket No.: 14492

Honorable Commissioner of Patents
Alexandria, VA 22313-1450

PETITION TO MAKE SPECIAL UNDER 37 CFR 1.102

Sir:

In accordance with the provisions of 37 CFR 1.102, applicants through the undersigned attorney of record petition that the above referenced application for patent be granted special status so as to be examined on an expedited basis. Submitted herewith is the petition fee set forth under 37 CFR 1.17 (h). Any deficiencies in the petition fee may be charged to deposit account number 04-1577.

Also accompanying this petition is a statement with respect to a pre-examination search which was made with respect to the claims of the application as filed. Also submitted is an Information Disclosure Statement with references resulting from the pre-examination investigation together with copies of each reference.

Further, accompanying this petition is a detailed discussion with respect to the references which points out the differences

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between the references and the claimed invention.

It is respectfully requested that this petition be granted to make special the above referenced application for patent. Should the Petitions Examiner require any further information with respect to this petition, it is requested that the Petitions Examiner contact the undersigned attorney of record at the telephone number shown below for further expediting the petition process.

Please note the new address of the attorney of record set forth below which address is effective August 30, 2004.

Respectfully submitted,

DOWELL & DOWELL, P.C.

By 

Ralph A. Dowell, Reg. No. 26,868

Date: August 30, 2004

DOWELL & DOWELL, P.C.
Suite 406, 2111 Eisenhower Avenue
Alexandria, VA 22314
Telephone - 703 415-2555
Facsimile - 703 415-2559
E-mail - dowell@dowellpc.com



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**STATEMENT WITH RESPECT TO PRE-EXAMINATION SEARCH
ACCOMPANYING PETITION TO MAKE SPECIAL**

Sir:

A pre-examination search was made by the firm of Dowell & Dowell, P.C., of current address Suite 406, 2111 Eisenhower Avenue, Alexandria, VA 22314. The examination was made based upon the claims of the above referenced application as filed including claims 1-36.

The field of search included class 166 subclasses 76.1, 77.1, 77.2, 76.1, 78.1, 77.52, 75.14, 102, 104, and 384; Class 175, subclasses 320, 87, 89, 90, 162, 195, 170, 202, 203 and 315; and International Classification E21B019/00 and E21B019/22.

Copies of references located during the investigation are submitted together with an Information Disclosure Statement including PTO Form 1449.

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The above areas of classification were searched, including
U.S. and foreign art, on the Patent Office East Database System.

Respectfully submitted,

DOWELL & DOWELL, P.C.

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DETAILED DISCUSSION OF REFERENCE IN SUPPORT OF
PETITION TO MAKE SPECIAL

Sir:

Copies of the following references which are numbered consecutively 1-11 have been submitted in the accompanying prior art statement. The patents are being listed by number in order to facilitate the discussion of the references as they relate to the claims of the above referenced application for patent.

The following references are discussed.

1. U.S. Patent 5,842,530
2. U.S. Patent 6,502,641
3. U.S. Patent 6,158,516
4. U.S. Patent 5,975,207
5. U.S. Patent 6,003,598
6. U.S. Patent 6,431,286

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7. U.S. Patent 6,609,565
8. U.S. Patent Application Publication 2003 0098150
9. U.S. Patent 6,668,684
10. U.S. Patent 6,332,501
11. U.S. Patent 6,065,550

For the Examiner's information, five Canadian references were cited in a previous Information Disclosure Statement filed with respect to the above referenced application for patent. Copies of these references are already of record. However, it should be noted that Canadian patent 2,322,916 is equivalent to U.S. Patent 6,431,286 which is number 6 on the list above. Canadian patent 2,235,555 is equivalent to U.S. Patent 6,003,598 which is listed as number 5 above. Canadian patent 2,332,422 is equivalent to U.S. Patent 6,332,501 which is number 10 listed above and Canadian patent 2,292,214 is equivalent to U.S. Patent 6,502,641 which is number 2 listed above.

Canadian patent 2,298,089 falls within a category which is similar to the discussion set forth below with respect to patents listed as numbers 2, 3, 4, 9 and 10.

The present invention as defined by claim 1 directed to a drilling rig for a well which includes a base and a mast mounted on the base wherein a top drive is operable to engage and rotate

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down whole equipment and wherein the top drive is slideably mounted to the mast for longitudinal movement. A coiled tubing injector is operable to move coiled tubing in and out of the well and is also mounted on the mast such that the coil tubing injector is selectively transposed between a first position wherein the injector is in line with the mast to a second position wherein the injector is out of line with the mast. Thus, the primary feature of the invention is the mounting of the top drive and a coiled tubing injector on a single mast to allow easy switching between jointed pipe drilling and coiled tubing drilling.

None of the references listed at 1-11 above provide such structure or utility and, therefore, it is respectfully submitted that the present invention is novel over the prior art.

ANALYSIS OF PRIOR ART

References 2, 3, 4, 9 and 10 disclose structures which clearly have no relevance to the patentability of the present invention. These rigs do not disclose a mast upon which a top drive can slide up and down and do not disclose a coiled tubing injector which can be transposed in and out of line with any such mast.

Reference 11 also clearly has no relevance as it does not

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disclose either a coiled tubing injector mounted on a mast, a mast and coiled tubing injector mounted on a base (there are two separate bases - see Figure 14), or a top drive mountable on the mast.

The remainder of this analysis will therefore focus on items 1 and 5 through 8. In brief, rather than rendering the present invention anticipated or obvious, these references highlight the difficulties faced by drilling rig designers in achieving a rig easily switchable between jointed pipe and coiled tubing operations.

Reference 1 is a coiled tubing and jointed pipe drilling rig. The unit is trailer-mounted, has a raisable mast and a coiled tubing injector which is transposable from a first position in which the injector is in line with the mast and a second position in which the injector is out of line with the mast. The coiled tubing injector is mounted on a raised platform on the trailer. The mast also has a winch system for raising and lowering equipment within the mast.

In the rig of reference 1, the coiled tubing injector is mounted not on the mast, but instead on a platform on the trailer. This configuration results in two difficulties. First, having the coiled tubing injector mounted on the trailer results in a configuration requiring more time in changing the rig from

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its transportation mode to its operational mode as two separate steps are required, namely the raising of the mast and the raising of the platform to an operational height. Second, in transportation mode, the height of the rig is much greater than in the present invention as the coiled tubing injector is maintained in a vertical orientation. This can be problematic since it is often necessary for such rigs to be transported under bridges, overpasses, etc. Additionally, the height of the coiled tubing injector above the trailer in transportation mode results in a high center of gravity, and a greater risk that the trailer might tip during transportation.

More importantly, however, reference 1 does not disclose the mounting of a top drive on the mast for slidable movement thereon. There is no mention of a top drive in reference 1, nor any suggestion that such an apparatus can be mounted on the mast. Indeed the mast, as designed, could not accommodate a sliding top drive. The use of a top drive for jointed pipe drilling improves the efficiency of jointed pipe operations and the combination of top drive jointed pipe drilling and coiled tubing drilling is highly advantageous. Reference 1 simply does not disclose nor suggest the mounting of a top drive on the mast.

Thus, reference 1 does not solve the problem of providing a rig which may be easily switched between jointed pipe and coiled

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tubing operations, and in particular, does not disclose the mounting of both a top drive and a coiled tubing injector on a mast. Reference 1 is, therefore, not relevant to the patentability of the present invention.

References 5 to 8 are related references, all being inventions of Mark Andreychuk. Each of these references discloses a rig comprising a raisable mast mounted on a truck with a coiled tubing injector slidable on the mast as controlled by a winch system, the coiled tubing injector being transposable from a first position in line with the mast and a second position out of line with the mast.

References 5 to 7 make no mention of the use of a top drive in jointed pipe drilling. Accordingly these references are not relevant for the reasons discussed above with respect to reference 1.

Reference 8 discloses a variant of reference 5 to 7 in which the winch system controls a trolley which is slidable on the mast. The trolley has a mechanism allowing equipment mounted thereon to be transposed from a first position in line with the mast and a second position out of line with the mast. The application discloses the mounting of a coiled tubing injector, or a top drive on the trolley. However, to switch between the two pieces of equipment, it is necessary to "park" one of the

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units, manually disengage it from the trolley, and manually engage the other piece of equipment. Thus, it is not possible to switch between coiled tubing operations and jointed pipe operations quickly, and to do so requires the involvement of workers which can lead to dangerous situations.

Thus, references 1 and 5 through 8 exemplify the difficulties the industry has faced in developing a drilling rig capable of easily switching between jointed pipe and coiled tubing operations. None of the references located in the patentability search disclose applicants' solution of mounting both a slidable top drive and a coiled tubing injector on a single mast, and as such, none of these references are relevant to the patentability of the present invention.

The patentability search has also not uncovered any references relevant to the second aspect of the present invention, namely a system and method of assembling bottom hole assemblies.

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CONCLUSION

In view of the foregoing, it is respectfully submitted that this application be accorded accelerated examination in accordance with 37 CFR 1.102.

Respectfully submitted,

DOWELL & DOWELL, P.C.

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